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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,881	10/18/2001	Sandip Lahiri	AUS920010744US1	7332
45371	7590	05/31/2005	EXAMINER	
IBM CORPORATION (RUS) C/O SIEGESMUND & ASSOCIATES 4627 NORTH CENTRAL EXPRESSWAY, SUITE 2000 DALLAS, TX 75206			PATEL, NIRAV B	
			ART UNIT	PAPER NUMBER
			2135	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,881

Applicant(s)

LAHIRI, SANDIP

Examiner

Nirav Patel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/18/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/18/01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This action is in response to the application filed on 10/18/2001.
2. Claims 1-26 are under examination.

Drawings

3. The drawing (Fig. 8B) is objected to under 37 CFR 1.83(a) because it fails to show component 848 (personal display computer) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:

Description of Fig. 5B, page 9 lines 16-18 ("LA CS 512, top center LA 514...") doesn't match with Fig. 5B.

Description on page 11 lines 20-22 ("Lenses 515 consist of smatter optical lenses 525....") doesn't match with drawing.

Claim 13 line 3 "a scrambling program program...."(suggestion: delete repeated word).

Please look over entire specification for other minor informalities for all typos and graphical errors.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1, 3-5, 9, 12, 13, 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Kajiwara (US Pub. No. 2002/0061140).

As per claim 1, Kajiwara discloses:

dividing an image into an N times M array of screen segments on a computer screen [Fig.3, Fig. 4B and Fig. 4C, *paragraph (¶) 0051 lines 1-3* “In FIG. 3, the numbers of pixels in the horizontal and vertical directions of the multi-level image are supposed to be represented as (X, Y)”, *paragraph (¶) 010 lines 4-6* “encoding image data to generate encoded data capable of expressing multiple self-similar images of different sizes corresponding to the image data”]; and *changing the orientation* (i.e. encoding or encrypting) of each of the screen segments [*paragraph (¶) 0010 lines 4-6* “encoding image data to generate encoded data capable of expressing multiple self-similar images of different sizes corresponding to the image data”] so that the image can be *read by viewing* through an N times M array *lens unit* [**Fig.1 component 107 image display unit**].

As per claim 3, the rejection of claim 1 is incorporated and Kajiwara discloses that changing the orientation (i.e. encoding) of each of the screen segments is performed by *rotation* [*paragraph (¶) 0057, lines 1-4* “two-dimensional discrete wavelet transform two more times only to the sub-band LL, the image is decomposed (i.e. rot or crumble) into seven sub-bands LL, LH1, HL1, HH1, LH2, HL2 and HH2 as shown in FIG. 5”].

As per claim 4, the rejection of claim 1 is incorporated and Kajiwara discloses that changing the orientation (i.e. encoding) of each of the screen segments is performed by shrinking [Fig. 4C (reducing the size of the image) *paragraph (¶) 0057, lines 1-4* “two-dimensional discrete wavelet transform two more times only to the sub-band LL, the image is decomposed (i.e. rot or crumble) into seven sub-bands LL, LH1, HL1, HH1, LH2, HL2 and HH2 as shown in FIG. 5”, *paragraph (¶) 0010, lines 4-6* “encoding image data to generate encoded data capable of expressing multiple self-similar images of different sizes corresponding to the image data”].

As per claim 5, the rejection of claim 1 is incorporated and Kajiwara discloses that N X M array of screen segments (i.e. encoded image) is *transmitted* to a display glasses having a personal display computer [Fig. 2 (207), *paragraph (¶) 0082, lines 3-5* “the code output unit 207 is, for example, a storage device such as a hard disk or memory, an interface of network lines (which is used for data communication and transmission), or the like”].

As per claim 9, this claim has limitations those are similar to limitations of claim 1 and claim 5, thus it is rejected with the same rationale applied against claim 1 and claim 5 above. And further Kajiwara discloses:
changing the orientation (i.e. decoding or decrypting) of each of the screen segments [Kajiwala, *paragraph (¶) 0007 lines 1-4*, “ an image data decoding means capable

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of selectively decoding multiple pieces of image data of different sizes from the encoded image data included in the encoded data string”].

As per claim 12, this claim has limitations those are similar to limitations of claim 1, thus it is rejected with the same rationale applied against claim 1 above. And further Kajiwara discloses:

a programmable processor **[paragraph (¶) 0059 lines 16-17 “read and executed by a CPU”(Central Processing Unit)];**

a storage medium **[paragraph (¶) 0059 lines 15 “stored in a memory(not shown) such as ROM or RAM”];**

a program (i.e. data) residing in the storage medium **[paragraph (¶) 0059 lines 13-15 “the program code according to the flowchart is supposed to be stored in a memory (not shown) such as ROM or RAM”].**

As per claim 13, this claim has limitations those are similar to limitations of claim 9 and claim 12, thus it is rejected with the same rationale applied against claim 9 and claim 12 above.

As per claim 25, the rejection of claim 13 is incorporated. This claim has limitation that is similar to limitation of claim 3, thus it is rejected with the same rationale applied against claim 3.

As per claim 26, the rejection of claim 13 is incorporated. This claim has limitation that is similar to limitation of claim 4, thus it is rejected with the same rationale applied against claim 4.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 6-8, 10, 11, 21, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajiwara (US Pub. No. 2002/0061140) and further in view of Jones (US Pub. No. 2002/0101988).

As per claim 2, the rejection of claim 1 is incorporated. Kajiwara doesn't explicitly disclose that changing the orientation of each of the screen segments is performed by *inversion*.

However, Jones discloses that changing the orientation (i.e. encrypting) of each of the screen segments is performed by *inversion* [**paragraph (¶) 0029, lines 1-2 "Inversion of the text messages on a kiosk screen is illustrated in FIGS. 5 and 5a"**].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Jones into the teaching of Kajiwara to use inversion for changing the orientation of each of the screen segments. The modification would be obvious because one of ordinary skill in the art would be motivated to invert the image so that the image can be view after the deinversion (decryption) by the glasses [Jones, *paragraph (¶) 0028 lines 5-6*].

As per claim 6, the rejection of claim 5 is incorporated and Kajiwara discloses that *codeword* (which is transmitted along with encoded image) [*paragraph (¶) 0011 lines 1-4*, “an additional information data (i.e. codeword) encoding means for generating encoded data of additional information data related to each of the multiple self-similar images”, *paragraph (¶) 0012 lines 1-5*, “an encoded data string generation means for generating an encoded data string including the encoded data generated by the image data encoding means and the encoded data generated by the additional information data encoding means”].

Kajiwara doesn't explicitly disclose that a personal display computer *program in a memory* of the personal display computer *determines* whether a codeword (i.e. sequence number or additional information data) has been received.

However, Jones discloses that a personal display computer program in a memory of the personal display computer *determines* whether a codeword (i.e. sequence number or additional information data) has been received [*paragraph (¶) 0031, lines 12-14* “Memory module 54 stores information such as the sequence

number of the transaction/authentication session, *paragraph (¶) 0032 lines 7-15* successful authentication confirms the sequence number stored in memory module 54”].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Jones into the teaching of Kajiwara to determine whether a codeword (i.e. sequence number or additional information data) has been received. The modification would be obvious because one of ordinary skill in the art would be motivated to do this because codeword (additional information data) can be used for determining the decoding (decrypting) technique.

As per claim 7, the rejection of claim 6 is incorporated and further Jones discloses:

responsive to a *determination* that a codeword has been received, the personal display computer program accesses a set of values for N and M from a personal display computer memory [*paragraph (¶) 0033 lines 1-3*, “In step 160, the decryption module 55 reads the sequence number, and selects the stored decryption scheme associated with the sequence number”].

As per claim 8, the rejection of claim 7 is incorporated and further Jones discloses:

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responsive to accessing a set of values for N and M from the personal display computer memory [*paragraph (¶) 0033 lines 1-3*, “In step 160, the decryption module 55 reads the sequence number, and selects the stored decryption scheme associated with the sequence number”], a microprocessor in the personal display computer causes the orientation of each of the screen segments to be changed (i.e. decrypted image) so that the image can be read by viewing at the display glasses [*paragraph (¶) 0031, lines 7-11,16-18* “The processor includes an authentication module 53, which performs processing tasks similar to the tasks performed by the dongle 4 described above, and a decryption module 55 which decrypts the image data according to an algorithm that corresponds to the encryption algorithm”, “decrypted image data is processed and sent to the glasses display 57”].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Jones into the teaching of Kajiwara to access a set of values for N and M, causes the orientation of each of the screen segments to be changed (i.e. decrypted image) so that the image can be read by viewing at the display glasses. The modification would be obvious because one of ordinary skill in the art would be motivated to determine the decryption scheme associated with the sequence number. The resulting decrypted data is then delivered to the glasses display [*Jones, paragraph (¶) 0033, lines 7-8*].

As per claim 10, the rejection of claim 9 is incorporated. This claim has limitations those are similar to limitations of claim 6 and claim 7, thus it is rejected with the same rationale applied against claim 6 and claim 7 above.

As per claim 11, the rejection of claim 10 is incorporated. This claim has limitations those are similar to limitations of claim 8, thus it is rejected with the same rationale applied against claim 8 above.

As per claim 21, the rejection of claim 13 is incorporated and further Jones discloses:
the display glasses further comprise a personal display screen and a personal display computer [**Jones, Fig. 7 component 57 and 52, 54**].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Jones into the teaching of Kajiwara to have a personal display screen and a personal display computer. The modification would be obvious because one of ordinary skill in the art would be motivated to use a personal display screen to display decrypted image and a personal display computer (comprising a memory and a processor) to store the decryption module and to execute the decryption module.

As per claim 22, the rejection of claim 13 is incorporated and Jones discloses:

the display glasses further comprise a frame **[Jones, Fig. 7]**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Jones into the teaching of Kajiwara to have frame. The modification would be obvious because one of ordinary skill in the art would be motivated to use a frame for the purpose of convenience and comfort.

As per claim 24, the rejection of claim 13 is incorporated. This claim has limitation that is similar to limitation of claim 2, thus it is rejected with the same rationale applied against claim 2 and further Jones discloses:

the scrambling **[paragraph (¶) 0035 lines 1-9, "a pre-programmed message is scrambled by the encryption module and appears as incoherent text at the kiosk display 5"]**.

7. Claims 14-20 and 23 are rejected under 35 USC 103 (a) for being unpatentable over Kajiwara in view of Jones, and further in view of Kishida et al. (U.S. Pub. No. 2002/0015008).

As per claim 14, the rejection of claim 13 is incorporated and Jones discloses:

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a *personal display computer* (which is contain a processor, a memory and a communication interface) in the display glasses **[Jones, Fig. 7 component 52 (processor), 54 (memory)]**.

Jones doesn't explicitly disclose a personal display computer contain transmitter/receiver (communication interface).

However, Kishida discloses that a personal display computer contain *transmitter/receiver* (communication interface) **[Kishida, Fig. 1 component 23 communication interface]**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kajiwara into the teaching of Jones to have transmitter/receiver. The modification would be obvious because one of ordinary skill in the art would be motivated to have transmitter/receiver (communication interface), which can be utilized for communicating with other devices.

As per claim 15, the rejection of claim 14 is incorporated and Jones discloses:

the personal display computer further comprises a personal display computer program (module) **[Jones, Fig.7 paragraph (¶) 0031 lines 3-12 "the processor includes an authentication module 53"]**.

As per claim 16, the rejection of claim 14 is incorporated and Jones discloses:

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the personal display computer further comprises a personal display computer memory **[Jones, Fig. 7 component 54 (memory)]**.

As per claim 17, the rejection of claim 14 is incorporated and Jones discloses:

the personal display computer further comprises a personal display computer microprocessor **[Jones, Fig. 7 component 52 (processor)]**.

As per claim 18, the rejection of claim 14 is incorporated and Kishida discloses:

the personal display computer further comprises a personal display computer transmitter/receiver **[Kishida, Fig. 1 component 23 communication interface]**.

As per claim 19, the rejection of claim 18 is incorporated and Kishida discloses:

the personal display computer transmitter/receiver uses a bluetooth technology **[Kishida Fig. 4 component 113 Bluetooth module paragraph (¶) 0049, line 2 “communication interfaces 13 and 23 using Bluetooth”]**.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kajiwara into the teaching of Jones to use bluetooth technology. The modification would be obvious because one of ordinary skill in the art would be motivated to provide a degree of

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security for communications between bluetooth devices and to eliminate the hassle of cables.

As per claim 20, the rejection of claim 18 is incorporated and Kishida discloses:

the personal display computer transmitter/receiver uses a conventional wireless technology [Kishida Fig. 4 component 113 Bluetooth module *paragraph (¶) 0049 line 2* “communication interfaces 13 and 23 using Bluetooth (which is wireless technology)”].

As per claim 23, the rejection of claim 16 is incorporated and Jones discloses:

a plurality of code words corresponding to a plurality of values for N and M (to decrypt the encrypted image) [Jones, *paragraph (¶) 0033 lines 1-3*, “the decryption module 55 reads the sequence number, and selects the stored decryption scheme associated with the sequence number”].

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wang et al (US Patent No. 5,742,263) discloses a head mounted display system includes a frame that can be worn on a user's head wherein the frame supports a display and an optical system that projects an enlarged image of video information depicted on the display at a distance from the user. The processor utilizes the decoded barcode values and locations to control the video information depicted on the display for head tracking purposes or the like.

Fujita (US Pub. No. 2001/0009410) discloses an object of the present invention is to provide a head-mounted display apparatus capable of radio communication with a computer unit at low cost and in compact structure, and a system therewith.

MaManis (US Patent No. 5,629,984) discloses a system and method for substantially reducing accidental disclosure of confidential information by interleaving video data frames with video flash frames.

Struyk (US Pub. No. 2003/0118183) discloses an image altering apparatus which provides confidential viewing of a video display by means of time multiplexing the fundamental display image with a color-inverted image thereof on a pixel-by-pixel basis.

Bonneau et al (US Patent No. 6,002,794) discloses color digital image data is encoded and compressed by a technique which combines the advantages of both wavelet and fractal encoding.

Ikeda et al (US Patent No. 6,263,107) discloses an image processing apparatus in which an image signal is divided into blocks each comprising a plurality of pixels and a quantization and a variable length encoding are executed so that a code amount of a plurality of blocks lies within a certain range.

Yerazunis et al (US Pub. No. 2003/0025667) discloses a device for displaying images only to an authorized user includes a display device configured to display the images.

Dunne et al (US Patent No. 6,529,209) discloses a method for providing privately viewable data in a publically viewable display.

Franck Andreas et al (DE 10141347 A1) discloses the representation method has the visual data (9) represented on an image screen (6) of a communications terminal (1) blocked from unauthorized reading by interleaving it with further image information (7), the screen viewed via special spectacles (2) having lenses (8) with a transparency which is switched in synchronism with the image interleaving, for permitting the visual data to be read.

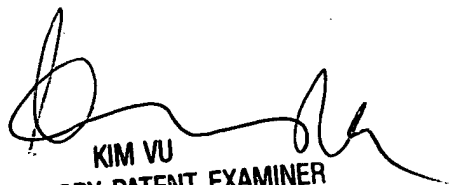
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nirav Patel whose telephone number is 571-272-5936. The examiner can normally be reached on 8 am - 4:30 pm (M-F).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nirav Patel.
5/20/05



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